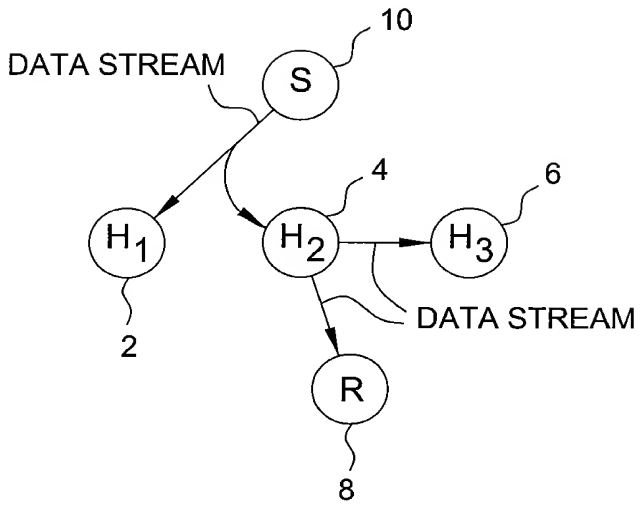



FIG. 1

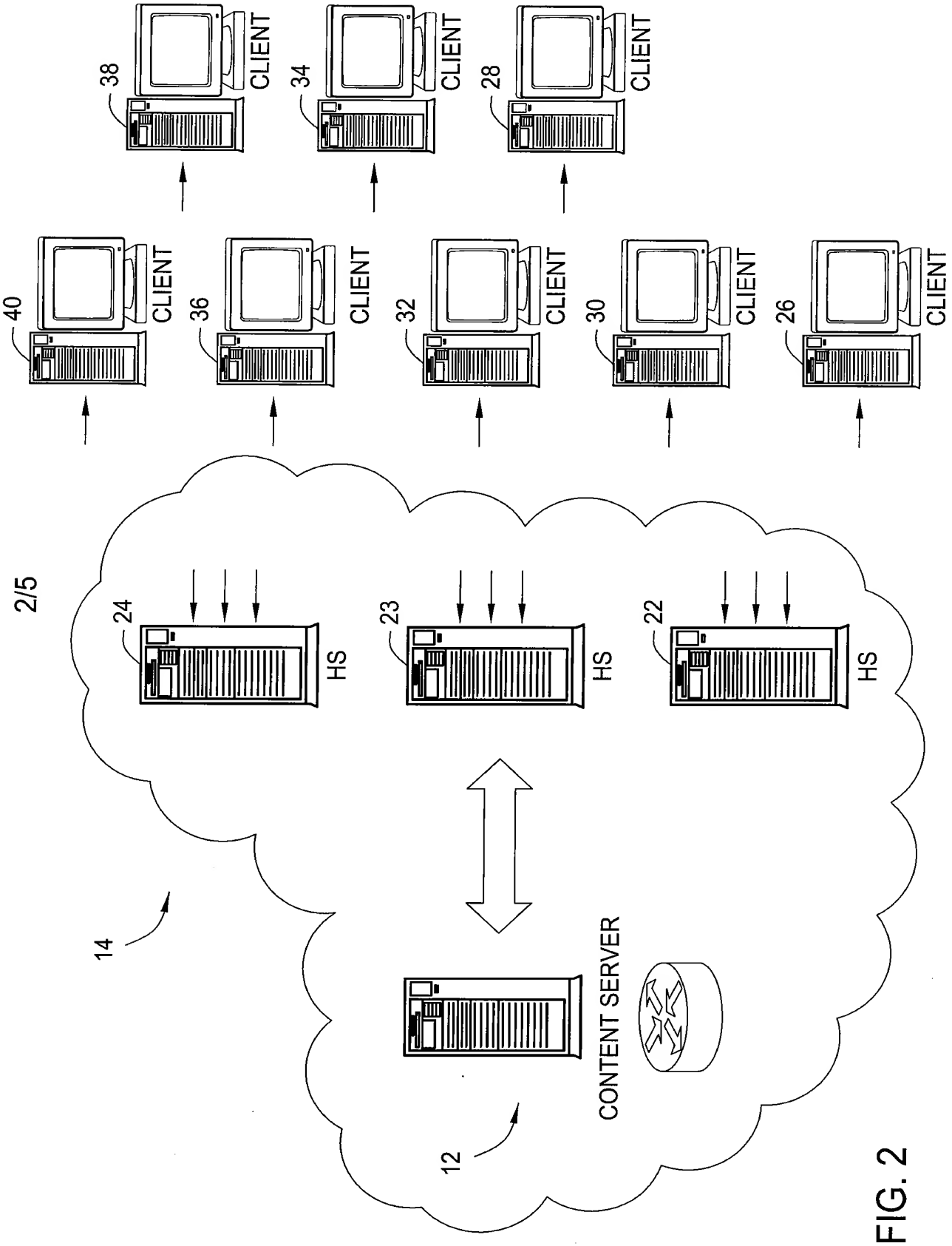

38
CLIENT
34
CLIENT
28
CLIENT
40
CLIENT
36
CLIENT
32
CLIENT
30
CLIENT
26
CLIENT
2/5
24
HS
23
HS
22
HS
14
CONTENT SERVER
12

FIG. 2

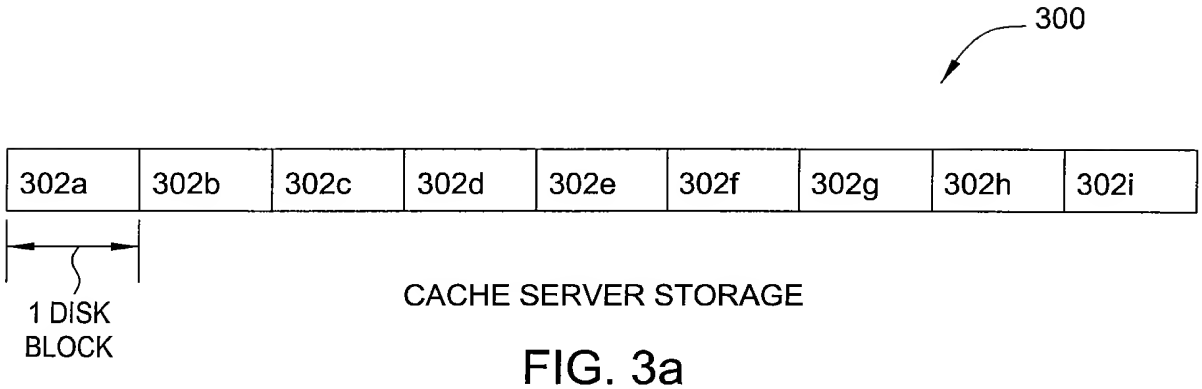



FIG. 3a
(PRIOR ART)

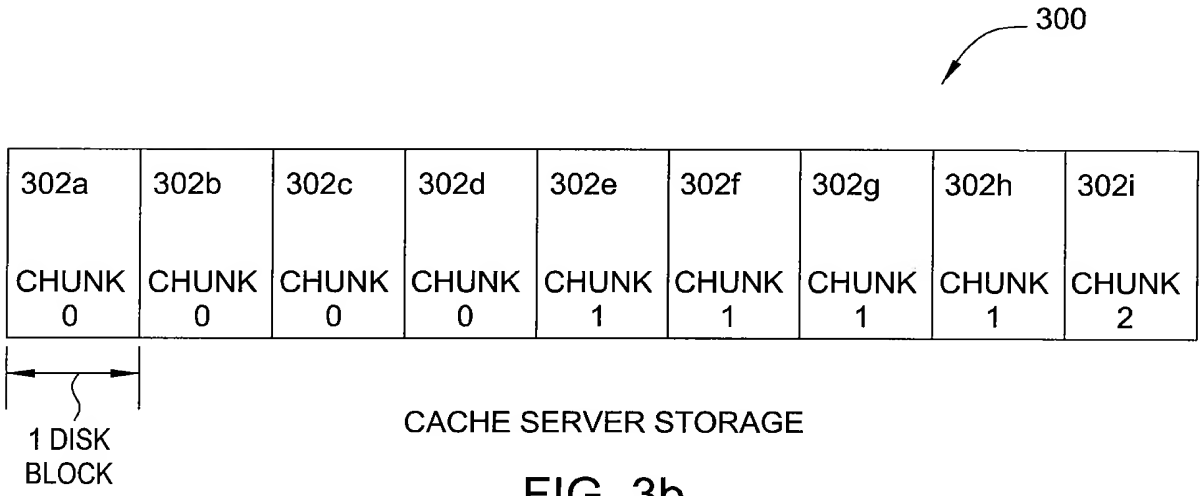
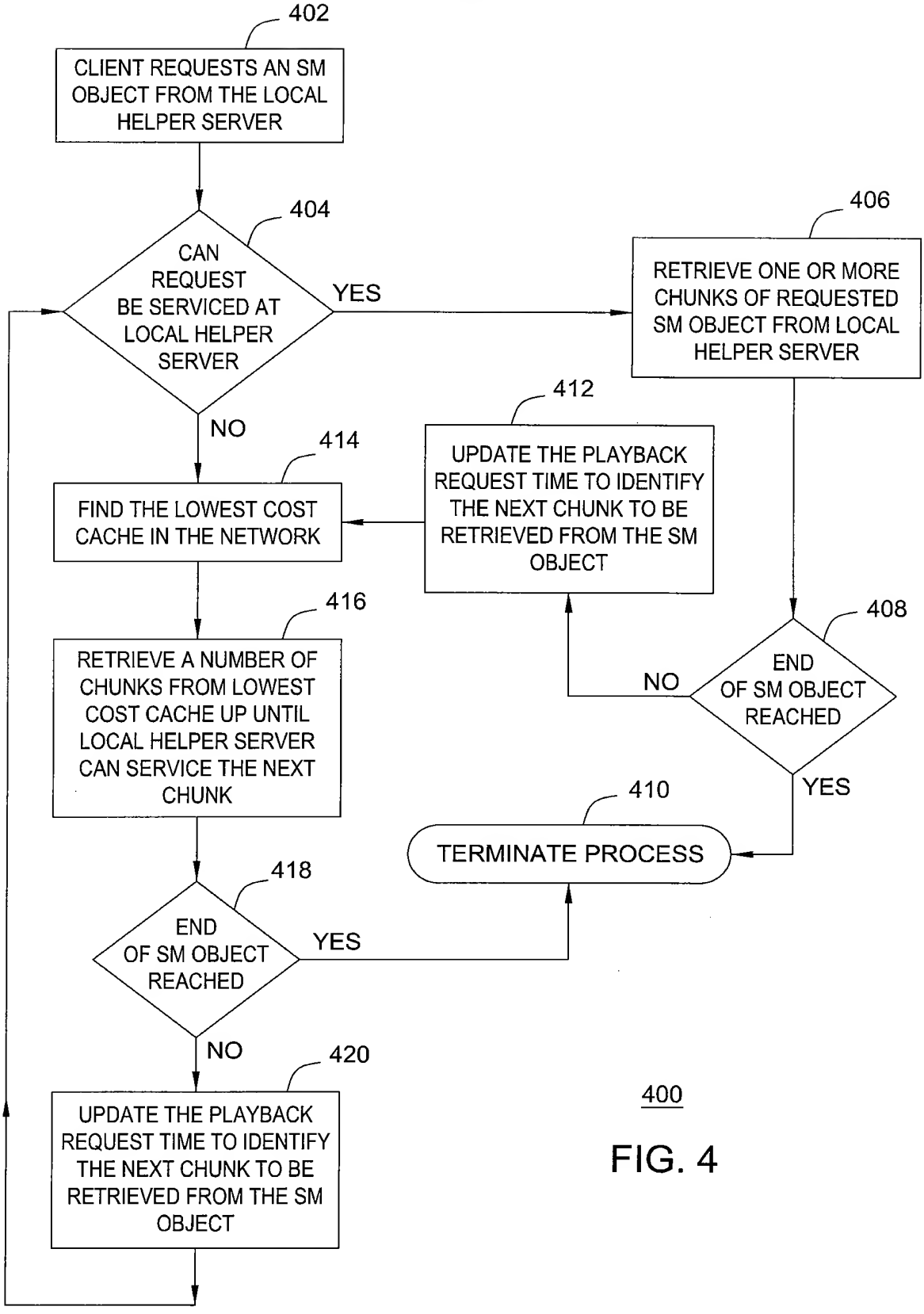
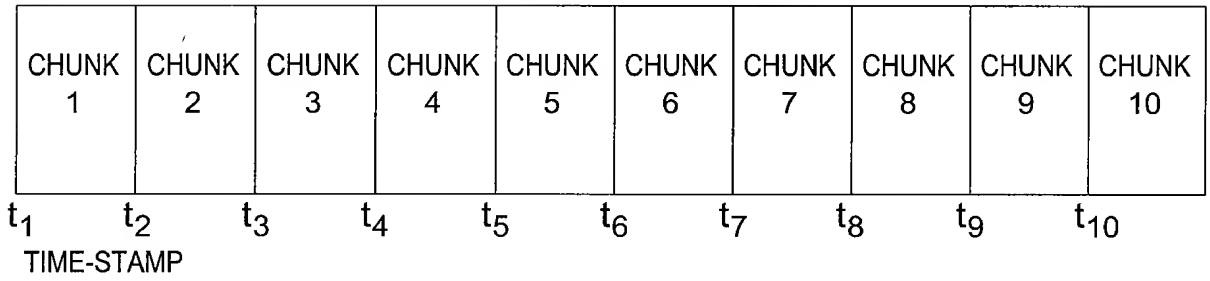



FIG. 3b


402
CLIENT REQUESTS AN SM OBJECT FROM THE LOCAL HELPER SERVER
404
CAN REQUEST BE SERVICED AT LOCAL HELPER SERVER
YES
NO
406
RETRIEVE ONE OR MORE CHUNKS OF REQUESTED SM OBJECT FROM LOCAL HELPER SERVER
412
UPDATE THE PLAYBACK REQUEST TIME TO IDENTIFY THE NEXT CHUNK TO BE RETRIEVED FROM THE SM OBJECT
414
FIND THE LOWEST COST CACHE IN THE NETWORK
416
RETRIEVE A NUMBER OF CHUNKS FROM LOWEST COST CACHE UP UNTIL LOCAL HELPER SERVER CAN SERVICE THE NEXT CHUNK
408
END OF SM OBJECT REACHED
NO
YES
410
TERMINATE PROCESS
418
END OF SM OBJECT REACHED
YES
NO
420
UPDATE THE PLAYBACK REQUEST TIME TO IDENTIFY THE NEXT CHUNK TO BE RETRIEVED FROM THE SM OBJECT

400

FIG. 4




STREAMING MEDIA (SM) OBJECT

FIG. 5a

| LOCAL SERVER CACHE 22 | REMOTE CACHE 23 | REMOTE CACHE 24 | CONTENT SERVER 14 |
|---|---|---|---|
| 2,3,4,7,8,9 | 1,2,5,6 | 1,3,5,6,7,8,9,10 | 1,2,3,4,5,6,7,8,9,10 |

CACHE STORAGE TABLE

FIG. 5b